

AMENDMENTS TO THE SPECIFICATION:

On page 1 after the title, please insert the following header:

B1 FIELD OF THE INVENTION

Please amend the paragraph on page 1, beginning at line 3 as follows:

B2 The present invention relates to a spray method and a spray system ~~defined in the preamble~~
of claims 1 and 9 resp.

On page 1 after line 4, please insert the following header:

B3 BACKGROUND OF THE INVENTION

On page 2 before line 1, please insert the following header:

B4 SUMMARY OF THE INVENTION

Please delete the paragraph beginning on page 2 at line 3 in its entirety.

On page 4 after line 5, please insert the following header:

B5 BRIEF DESCRIPTION OF THE DRAWINGS

On page 4 after line 13, please insert the following header:

B6 DETAILED DESCRIPTION OF THE INVENTION

Please replace the paragraph beginning at Page 1, Line 5, with the following written paragraph:

B7 Spray equipment comprising a rotary atomizer in the form of a so-called bell to atomize
and spray coating liquids onto an object to be coated are known from the U.S. patents ~~4,275,383~~
4,275,838 and 4,505,430; German patent documents 30 00 002 A1 and 35 09 874 A1. They

B7
disclose applying a high electrical potential, which may be positive or negative, to the rotary atomizers and/or to the spray coating liquid. Typically the high voltage is in the range of 4 kV to 140 kV. A high-voltage spray system fitted with an irrotational spray nozzle is known from U.S. patent 3,731,145.

Please replace the paragraph beginning at Page 2, Line 17, with the following written paragraph:

B8
The “microclimate” in particular relates to the spray jet’s moisture content and the ratio of the volatile ingredients to non-volatile ingredients in the spray jet. Illustratively the paint/pigment particles of coating liquids of low viscosities may be “thinned” by applying the accessory liquid and consequently they may then be better atomized in the spray jet and be also better charged electrostatically. Depending on the kind of accessory liquid, the latter also affects the electrical current between the spray system’s spray jet and the grounded object to be coated. The accessory liquid furthermore affects the fluidity of the coating liquid’s liquid particles on the object to be coated.

Please replace the paragraph beginning at Page 4, Line 14, with the following written paragraph:

B9
The coating-liquid spray system 2 of the invention shown in the drawings comprises a liquid atomizer in the form of a rotary atomizing element 4 driven by an omitted air turbine. Said element preferably shall be ~~shall be~~ an atomizing bell or pane rotating about an axis 6, further an external peripheral surface 8 and a front end surface 10. The end surface 10 assumes the shape of a bell (or saucer). Coating liquid issuing from the bell’s edge 12 – that is from the external periphery of the end surface 10 on account of the centrifugal force produced by the rotary atomizing element 4 in the form of a forward pointing spray jet 14 – flows radially from inside to outside on the ~~[[said]]~~ rotating end surface 10.

Please replace the paragraph beginning at Page 5, Line 16, with the following written paragraph:

B¹⁰
Preferably the accessory liquid 18 ~~shall be water~~ provided ~~the coating liquid of in~~ the spray jet 14 shall be water soluble. The accessory liquid 18 preferably shall be a solvent when the coating liquid of the spray jet 14 contains solvents. The feed of the accessory liquid 18 into the spray jet 14 allows modifying and matching the viscosity of the spray mist or of the microclimate of the spray jet 14 with respect to different coating liquids.

Please replace the paragraph beginning at Page 7, Line 5, with the following written paragraph:

B¹¹
The further embodiment of a spray system of the invention shown in Fig. 3 preferably also includes a cooling unit 50 to cool a system component in contact with the coating liquid on its way to the spray jet 14, said cooling being implemented in the present embodiment of the rotary atomizing element 4 by means of a fluid, cooled medium, during spray coating, in order to transmit the cold of the cooled coolant through the cold-conducting system component, preferably the rotary atomizing element 4, to the spray coating liquid before the latter is sprayed away. In the embodiment of Fig. ~~[[2]]~~ 3, the coolant 52 is guided behind the terminal zone 46 of the external periphery onto the external periphery surface 54, and the cold from the coolant 52 is transmitted to the coating liquid flowing through it which thereupon is sprayed as the spray jet 14.

Please replace the paragraph beginning at Page 7, Line 15, with the following written paragraph:

B¹²
The cooling unit 50 has a coolant line 56 to guide ~~guides~~ the coolant 52, which preferably is a cooled compressed gas, in particular cooled compressed air, inside ~~[[a]]~~ the coolant line 56 to a coolant discharge 58 that points at the external peripheral surface 54 of the rotary atomizing element 4. The cold of the coolant 52 passes through the rotary atomizing ~~[[body]]~~ element 4 as far as its end surface 10 over which flows the coating liquid centrifuged by the rotating rotary

B12
atomizing [[body]] element 4 and from which [[it]] the coating liquid 18 is flung off at the outer edge of said element in the form of the spray jet 14.

Please replace the paragraph beginning at Page 7, Line 21, with the following written paragraph:

B13
A ~~cooling-unit~~ cooler 60 to cool the coolant 52 preferably shall be directly mounted on the spray system 2 or be integrated into it. In this way short paths are implemented for the coolant 52. The coolant 52 preferably shall be a compressed gas, for instance compressed air from a compressed-air source 64, and it is metered through a metering element 66 (for instance a valve) and it is guided through a part of the coolant line 56 to the ~~cooling-unit~~ cooler 60 and cooled by the latter and thereupon it is guided onto the rotary atomizing element 4. The ~~cooling-unit~~ cooler 60 may contain a so-called cooling gas cartridge to cool the coolant 52.

Abstract:

Please replace the current Abstract with the following replacement/new Abstract